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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,611	10/03/2003	David K. Puterbaugh	06011/38140	9430

4743 7590 04/26/2005

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EXAMINER	
PRESTON, ERIK D	

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 04/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	**Application No.** 10/678,611	**Applicant(s)** PUTERBAUGH ET AL.	
	Examiner Erik D. Preston	**Art Unit** 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-32 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-32 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/6/04

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 12 is objected to because of the following informalities: the phrase "...the casing..." appears in the seventh line of the claim. This phrase lacks antecedent basis. For examination purposes it will be interpreted as: "...a casing..." Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims 9 & 19 contain the trademark/trade name "Goretex". Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe the construction of a breather plug and, accordingly, the identification/description is indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12, & 22-24 are rejected under 35 U.S.C. 102(b) as being anticipated by McAvena (US 5095612 supplied by the applicant).

With respect to claim 12, McAvena teaches an electric motor (Fig. 1, #10) comprising: A stator assembly (Fig. 3, #44) including a generally cylindrical core defining a stator bore and wire windings (Fig. 3, #41) housed in the core and extending outward from the ends of the core; a rotor shaft assembly (Fig. 3, #12) disposed in the stator bore of the stator assembly and including a generally cylindrical rotor affixed to a shaft extending along the central axis, the shaft including a first end extending outward from the casing and a second end; a generally open–ended motor casing (Fig. 3, #11) adapted to close the house the stator assembly in an interior thereof; a first end bell and a second end bell (Fig. 3, #25 & 26) adapted to close the open ends of the motor casing and substantially seal an interior of the motor casing from an exterior thereof, the first end bell and the second end bell including bearing assemblies (Fig. 3, #64) for rotationally supporting the rotor shaft assembly; a conduit box (Fig. 4, #14) mounted on the exterior of the casing, the conduit box having electrical access to the interior of the casing through an electrical inlet (Fig 4. #22) disposed on the exterior of the casing, wherein a plurality of electrical wires connected to the stator assembly (Fig. 4, #21) pass from the interior of the casing through the electrical inlet into the conduit box; and a coating material (Fig. 6, #55) adapted to encapsulate the wire windings of the stator assembly; wherein the coating material extends from the interior of the casing into the conduit box through the electrical inlet to encapsulate the electrical wires and cover a portion of the electrical wires extending into the conduit box (Fig. 4).

With respect to claim 22, McAvena teaches an electric motor (Fig. 1, #10) comprising: A casing (Fig. 1, #11); a stator assembly (Fig. 3, #44) disposed in the casing an including wire windings (Fig. 3, #41); a conduit box (Fig. 4, #14) mounted on the exterior of the casing, the conduit box having electrical access to an interior of the casing through an electrical inlet (Fig 4. #22) disposed on the exterior of the casing, wherein a plurality of electrical wires connected to the stator assembly (Fig. 4, #21) pass from the interior of the casing through the electrical inlet into the conduit box; and means for encapsulating the wire windings and a portion of the electrical wires, wherein the means for encapsulation extends from the interior of the casing into the conduit box through the electrical inlet to encapsulate the electrical wires and cover a portion of the electrical wires extending into the conduit box (Fig. 4).

With respect to claim 23, McAvena teaches an electric motor (Fig. 1, #10) comprising: A casing (Fig. 1, #11) being generally cylindrical and having open ends; a stator assembly (Fig. 3, #44) disposed in an interior of the casing, the stator assembly having a generally cylindrical shape to define an internal bore; a pair of casing closures (Fig. 3, #25 & 26) sized and adapted to close the open ends of the casing, at least one of the casing closures having a shaft bore; a rotor shaft assembly (Fig. 3, #12) disposed in the internal bore of the stator assembly and including a shaft; at least one end of the shaft extending outside the casing through a shaft bore of at least on of the casing closures; and bearing assemblies (Fig. 3, #64) adapted to rotationally support the shaft extending outside the motor casing through the shaft bore, wherein the casing closures and the bearing assemblies are adapted to substantially seal the interior of the casing.

With respect to claim 24, McAvena teaches the electric motor of claim 23, further comprising: An electrical inlet (Fig. 4, #22) disposed on the casing; a conduit box (Fig. 4, #14) having a conduit inlet (Fig. 4, #18), the conduit box mounted to an exterior of the casing such that the conduit inlet is substantially aligned with the electrical inlet; a plurality of electrical wires (Fig. 4, #21) adapted to provide power to the stator assembly, the electrical wires passing from the interior of the casing into the conduit box through the electrical inlet, and the conduit inlet; and at least one seal (Fig. 4, #61) disposed between the conduit box and the casing to substantially seal the electrical inlet of the casing.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 21 & 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over McAvena (US 5095612). McAvena teaches the electric motor of claims 12, and 23 wherein the rotor is encapsulated in insulator product (Col. 5, Lines 39-42). However, it does not specifically teach this product as being an epoxy. It would have been obvious at the time of the invention to have encapsulated the rotor with an epoxy such as the type that is used to encapsulate the windings because it is pliable, can be subjected to movement, and will not experience cracking (Col. 4, Lines 42-49).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over McAvena (US 509612) in view of Nakamura et al. (US 5490319). McAvena in view of Nakamura teaches the electric motor of claim 1 wherein the rotor is encapsulated in insulator product. However, it does not specifically teach this product as being an epoxy. It would have been obvious at the time of the invention to have encapsulated the rotor with an epoxy such as the type that is used to encapsulate the windings because it is pliable, can be subjected to movement, and will not experience cracking (Col. 4, Lines 42-49).

Claims 1, 2, 4, 7, 14, 17, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over McAvena (US 509612) in view of Nakamura et al. (US 5490319).

With respect to claims 1 & 32, McAvena teaches an electric motor (Fig. 1, #10) comprising: A casing (Fig. 1, #11) being generally cylindrical and having open ends; a stator assembly (Fig. 3, #44) disposed in an interior of the casing, the stator assembly having a generally cylindrical shape to define an internal bore; a rotor shaft (Fig. 3, #12) assembly disposed in the internal bore of the stator assembly and including a shaft; a pair of casing closures (Fig. 3, #25 & 26) sized and adapted to close the open ends of the casing, the casing closures including bearing assemblies (Fig. 3, #64) adapted to support the shaft and substantially seal the interior of the casing; and a coating material covering the stator assembly. However, McAvena does not teach that the coating material substantially covers the stator assembly. Nakamura teaches a stator assembly (fig. 1, #9) that is substantially covered by a coating material (Col. 6, Line 65-Col. 7, Line 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the motor of McAvena in view of the coating as taught by Nakamura because the coating of Nakamura is a good electrical insulator, permits good heat conduction, and experiences small thermal expansion thus ensuring high reliability (Nakamura, Abstract).

With respect to claim 2, McAvena in view of Nakamura teaches the electric motor of claim 1, and McAvena teaches and electrical inlet disposed in the casing (Fig. 4, #22); a conduit box (Fig. 4, #14) having a conduit inlet (Fig. 4, #18), the conduit box mounted to an exterior of the casing such that the conduit inlet is substantially aligned with the electrical inlet; a plurality of electrical wires (Fig. 4, #21) adapted to provide power to the stator assembly, the electrical wires passing from the interior of the casing into the conduit box through the electrical inlet; wherein the coating material extends from the interior of the casing through the electrical inlet and the conduit inlet to encapsulate the electrical wires and cover a bottom portion of the electrical wires extending into the conduit box (Fig. 4).

With respect to claims 4 & 14, McAvena in view of Nakamura teaches the electric motor of claim 1, McAvena teaches the electric motor of claim 12, and Nakamura teaches the coating material is impervious to moisture and is formed from a curable resin including an amount of at least fifty percent by weight of a filler material (Nakamura, Abstract).

With respect to claims 7 & 17, McAvena in view of Nakamura teaches the electric motor of claim 1, McAvena teaches the electric motor of claim 12, and Nakamura teaches an operative end of the shaft (Fig. 1, #1) extends outside the motor casing through a shaft bore in a first one of the end enclosures (Fig. 1, #4), and wherein the non-operative end of the shaft is enclosed in the motor casing by being disposed in a correspondingly sized slot in a second one of the end enclosures (Fig. 1, #37).

Claims 3, 13, & 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over McAvena (US 5095612) in view of Nakamura et al. (US 5490319) further in view of Schnyder (US 4381464). McAvena in view of Nakamura teaches the electric motor of claim 1 and McAvena teaches the electric motor of claims 12 & 24, but they do not teach a heat shrink tube having an adhesive lining adapted to seal ends of the electrical wires. However, Schnyder teaches a heat shrink tube (Fig. 5, #43) having an adhesive lining (Fig. 5, #47) adapted to seal the ends of the electrical wires. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the electric motor of McAvena, in view of the tubing as taught by Schnyder because the motor includes non-moisture absorbing insulation which effectively seals moisture out of the stator coil electrical connections (Schnyder, Abstract).

Claims 5, 6, 15, 16, 26, & 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over McAvena (US 5095612) in view of Nakamura et al.(US 5490319) further in view of Iketani (US 2005/0062233). McAvena in view of Nakamura teaches the electric motor of claim 1, McAvena teaches the electric motor of claims 12 & 23, and McAvena teaches the bearing assemblies comprising a ball bearing (Fig. 3, #64), and a shaft lip seal (Fig. 3, #66), but does not teach a one-way check seal or a slinger disposed on an outer face of one of the bearing assemblies. However, Iketani teaches a slinger (Fig. 1, #14) and an outer seal (Fig. 1, #23) that inherently operates as a one-way check seal (any pressure that builds up in the chamber between this seal and the lip seal (Fig. 1, #22) will be allowed to escape from the chamber by way of the outer seal). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the electric motor of McAvena in view of the bearing assembly as taught by Iketani because it keeps foreign matter from entering the bearing unit of the motor (Iketani, Paragraph 46).

Claims 8-10, 18-20, & 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over McAvena (US 5095612) in view of Nakamura et al.(US 5490319) further in view of Mashiko et al. (EP 1363069 supplied by the applicant).

With respect to claims 8, 18, and 28, McAvena in view of Nakamura teaches the electric motor of claim 1, McAvena teaches the electric motor of claims 12 & 23, and McAvena teaches an end closure having a vent (Fig. 3, #67), but doesn't teach the vent comprising a breather plug. Mashiko teaches a breather plug (Fig. 1, #1). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the electric motor of McAvena in view of the breather plug as taught by Mashiko because it prevents water or dust from entering the inside of a housing while discharging gas generated in the housing and relaxes the change of pressure inside the housing caused by a change of temperature (Mashiko, Paragraph 4).

With respect to claims 9, 10, 19, 20, 29, and 30, McAvena in view of Nakamura further in view of Mashiko teaches the electric motor of claim 8, McAvena in view of Hiroaki teaches the electric motor of claims 12 & 23, and Mashiko teaches a breather plug constructed of fluororesins including polytetraflouroethylene (Gortex being a well known brand name of a polytetraflouroethylene).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 3638055, US 5442248, US 6608414, and US 20020117919. All of the above are water resistant motors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik D. Preston whose telephone number is (571)272-8393. The examiner can normally be reached on Monday through Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11/14/2005

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